DISCUSSION

Trend Study No. 50B-7c

*** This site was not read in 1998 and is being discontinued. Only text from the 1992 "Utah Big Game Range Trend Studies" report has been included. Consult the 1992 report for maps and data tables.

The Motoqua trend study is located on winter range in the lower portion of the East Fork of Beaver Dam Wash. Elevation is approximately 4,040 feet with a slope of 10% and westerly aspect. The range type is southern desert shrub and is totally shrub dominated. Perennial herbs are nearly nonexistent. Deer use appears light and cattle grazing is evident.

Soils, typical of black brush communities in this area, are very shallow, rocky, and appear heavily eroded. Erosion pavement occupies half of the ground surface. Exposed soil covered 14% of the ground surface in 1982. It is now down to 4% in 1992. Rock cover increased from 3% to 15%. Litter cover (34%) is composed almost entirely of ephemeral annual grasses, such as cheatgrass and foxtail brome. Basal vegetative cover increased from less than 1% in 1982 to 4% in 1992.

The key browse species include blackbrush with lesser amounts of desert bitterbrush. Blackbrush is the most numerous species and has increased from 1,866 plants/acre in 1982 to 2,133 by 1992. Desert bitterbrush consists of scattered, five foot high, mostly decadent plants with an estimated density of 433 plants/acre in 1982, now up to 566 in 1992. Percent decadency of bitterbrush has increased from 8% to 77%. Utilization of both species is light to moderate, but blackbrush often appears hedged, at least partly, because of its normal growth habit. Percent decadenty has increased from 21% in 1982, to 28% in 1992. Overall vigor has improved since 1982 when 54% of the blackbrush sampled displayed poor vigor. During the 1992 reading, only 3% of the blackbrush displayed poor vigor, likely due to the above normal precipitation this past year. On nearby burned areas, desert bitterbrush predominates as blackbrush is well-known as intolerant of fire. This differential response to fire may have management implications. Other browse in the area includes green ephedra, Mohave desert rue, and datil yucca. The latter two are essentially worthless as forage plants.

Herbaceous plants are nearly absent from the site, which is typical of blackbrush dominated communities. Bottlebrush squirreltail was the only perennial grass encountered or observed and it was rare. Annual brome grasses are present, but not abundant. Annual or perennial forbs are few. None were encountered on the study plots during the 1982 reading. In 1992, a few individuals of gooseberryleaf globemallow and an Astragalus sp. were encountered.

1982 APPARENT TREND ASSESSMENT

This site is typical of blackbrush dominated areas in this part of the state. Soils are shallow and covered with rocks and pavement. Perennial herbaceous vegetation is usually scarce. On this site, soil movement is noticeable and plants appear pedestaled. Pavement covers half of the ground surface. Percent bare ground is fairly low for a site like this at 14%. The shrub component seems stable, barring fire or some other extraordinary influence.

1992 TREND ASSESSMENT

Soil conditions have improved slightly since 1982. Basal vegetative cover has increased from less than one percent to four percent, while bare ground dropped from 14% to 4%. Pavement cover remained the same while rock cover increased from 3% to 15%. Some soil movement is still occurring, overall protective ground cover has increased from 86% to 96% which should provide increased protection of the soil and reduce the amount of erosion occurring. Soil trend is slightly up, but still in poor condition. Key browse on the site have increased in density and show improved vigor. Trend for browse is up. Herbaceous vegetation

is severly deficient and of no consequence on this site. Bottlebrush squirreltail, the only perennial grass encountered, occured in only 2% of quadrats. The two forbs sampled had a combined quadrat frequency of only 12%. Trend for these few species is up slightly from 1982.

TREND ASSESSMENT
soil - slightly improved, but still poor condition
browse - up for blackbrush
herbaceous understory - nearly non existent, but slightly up